

North Wood Road and Rockville Pike:

Implementation of the BRAC alternative will add additional congestion to all intersections in the roadway network surrounding the facility. The forecasted increase of inbound AM gate traffic includes an additional 1,430 privately-operated vehicles (POV) on surrounding roadways between 05:00 & 10:00. 1,051 of those POV would arrive between 06:00 & 08:00. This correlates to an additional 209 POV at North Gate during the peak hour of 06:30 – 07:30 for a total (including the current number of inbound traffic) of 843 POV.

One cause of local congestion is the backup of cars from the NNMCC security gates due to a lack of adequate storage for cars waiting to pass through security. North Gate at the intersection of Rockville Pike and North Wood Rd is the most heavily used gate on base. The left turn only lane on Rockville Pike southbound into North Gate can store approximately ten vehicles. Due to the timing of lights along Rockville Pike southbound, every five minutes approximately 19 vehicles are queued waiting to turn into North Gate. Ten vehicles are stored in the turn only lane while the remaining nine block one of the three Rockville Pike southbound lanes. When a large vehicle (SUV, Van, or Truck) are in the Rockville Pike northbound left turning lane waiting to turn into the NIH truck inspection facility, which is directly across from NNMCC North Gate, the queue of vehicles on southbound Rockville Pike can reach up to 25 vehicles and completely blocks traffic at the Rockville Pike & Cedar Lane intersection. Figures 2, 3, and 4 show the impact of a left turning truck on traffic and the ability for NNMCC traffic to safely make a left turn into the North Wood Road gate.



Figure 2: A left-turning garbage truck blocks the field of vision for left-turning NNMCC traffic. This backup causes left-turning traffic to queue up to 25 cars, blocking the nearby Cedar Road/Rockville Pike intersection.

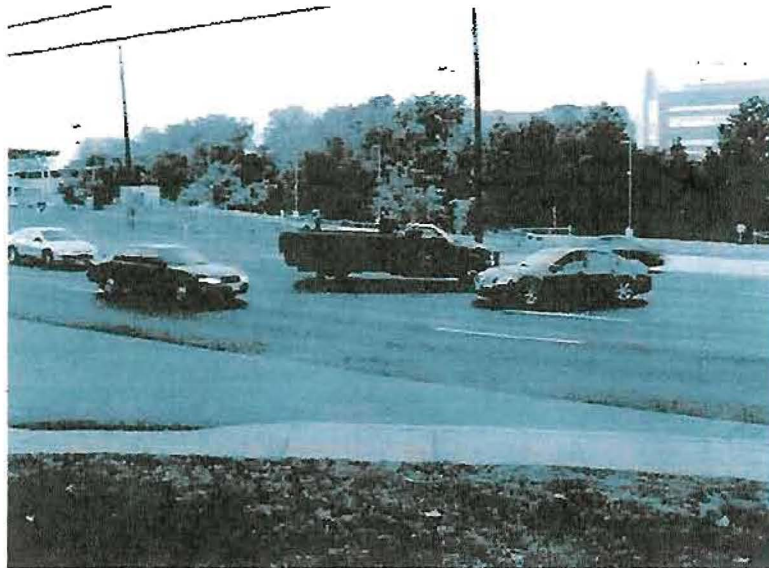


Figure 3: The impacts to the field of vision for left-turning NNMC traffic are demonstrated in this near-accident. Increased use of this left-turning lane after BRAC will increase the number of potential accident scenarios.

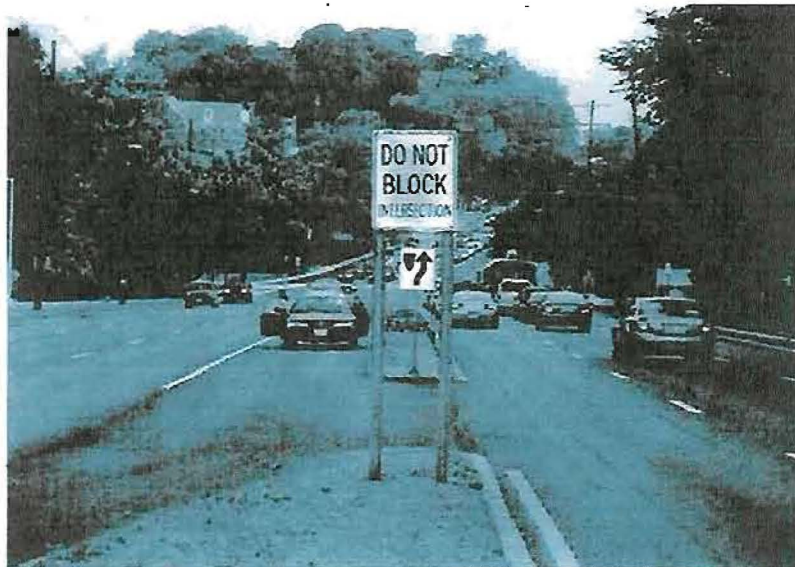


Figure 4: This figure shows that there is adequate space in the median to install a north-bound left turning lane (located at the bottom of this photograph). In addition, the proximity to the currently failing Cedar Lane intersection can be seen in the background.

Rockville Pike/South Wood Road intersection, only 55 cars make the left turn to go Southbound onto Rockville Pike. As the full cycle for this intersection is 2 minutes 30 seconds for Rockville Pike traffic and 30 seconds for South Drive/South Wood Road Traffic, this shows that there are 20 full cycles within a one-hour period in the afternoon. During each of these cycles, fewer than 3 cars (on average) are able to make the left turn onto southbound Rockville Pike. The primary reason for this low value is that pedestrians crossing Rockville Pike to reach the Medical Center Metrorail station block traffic and prevent vehicles from making the left turn until all pedestrians have crossed. This essentially blocks left turning traffic for the entire 30 seconds – allowing only two or three cars to make the turn before the light cycles again. This low turning rate produces a backup of traffic onto NNMC from the gate to the parking garages.

Field observations show that on average, 30-40 cars are lined up at this gate, waiting to make a left turn onto Rockville Pike. The pedestrian crossings at this intersection are a primary factor in the backup of traffic from the gate to the parking garages. This backup also impacts the ability for emergency vehicles to gain egress from the facility in the afternoon, increasing response time and decreasing the emergency services essential to the function of the hospital.

The traffic study also models an increase in traffic after BRAC is implemented to 97 vehicles making a left turn in the afternoon. Given an increase in Metro ridership, the ability for cars to make the left turn will either not change or worsen after BRAC is implemented.

Specific Roadway Projects Proposed for DAR Approval

Implement traffic improvements at the intersection of Rockville Pike & North Wood Road to include a signal analysis, a new left turning lane for northbound traffic and expanding the storage in the Rockville Pike southbound left turning lane approaching North Wood Rd.

To mitigate the additional BRAC related traffic and to improve traffic flow on Rockville Pike southbound during AM hours three improvements are necessary:

1. Improve left-turning traffic from Northbound Rockville Pike. This improvement can be implemented through the installation of a left-turning lane in the existing median of Rockville Pike. This will provide a turning lane for northbound traffic attempting to make a left turn without impacting the field of vision for left-turning traffic entering the North Wood Road gate. Figure 4 shows that there is adequate space at the existing median to install this left turning lane without impacting the other through lanes.
2. Improve the flow of left-turning traffic from Southbound Rockville Pike. This can be implemented through a new left-turning signal at this intersection. The signal analysis is needed to ensure that the signal can be appropriately timed with adjacent lights to not impact the flow of traffic in the AM or PM rush periods. This coordination will be

implemented by the State of Maryland and the Montgomery County Department of Public Works. This signal will move the entire queue of left-turning traffic into NNMC without impacting the Cedar Lane/Rockville Pike intersection.

3. Improve the storage of left-turning traffic from Southbound Rockville Pike. The additional storage of cars in an expanded left-turning lane will reduce friction on the three southbound lanes. This will move as many cars as possible out of the travel through lanes on Rockville Pike. Field observations show that an additional 100' of storage can be implemented as an expansion of the existing turning lane.

The cost for improvements to the North Wood Road/Rockville Pike Intersection is approximately \$1 million.